

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 (Currently Amended). A method of detecting a proliferative-related disease state that is a tumor or psoriasis in a subject, comprising:

- (a) obtaining from the subject a sample of cells suspected of being in the disease state;
- (b) detecting the level of expression of A<sub>3</sub> adenosine receptor (A3AR) in said sample cells; and
- (c) comparing the level of said A3AR expression in said cells to a control level, the control level being the level of A3AR expression in normal cells of the same subject, or being a standard reference level for the A3AR expression which is indicative of a normal state;

wherein a difference in the level between the control and the sampled cells is indicative of said diseased disease state.

2 (Original). The method of Claim 1, wherein the difference is an increase in the level of the A3AR expression level as compared to the control level.

3 (Cancelled)

4 (Currently Amended). The method of Claim 31, wherein said disease state is a tumor.

5 (Original). The method of Claim 4, wherein the tumor is a solid tumor.

6 (Currently Amended). The method of Claim 31, wherein ~~the said disease state is an autoimmune disease~~ ~~psoriasis~~.

7 (Currently Amended). A method for determining the severity of a proliferative-related disease state that is a tumor or psoriasis in a subject, comprising:

- (a) obtaining from the subject a sample of cells suspected of being in ~~a~~the disease state;
- (b) detecting the state of expression of A<sub>3</sub> adenosine receptor (A3AR) in said sampled cells; and
- (c) comparing the level of A3AR expression in said cells with a predetermined calibration curve of the level of the A3AR;

wherein the values of the calibration curve ~~being~~ are correlated to the severity of the disease state, thereby determining the severity of the disease state of the subject.

8 (Cancelled)

9 (Currently Amended). A method according to Claim 87, wherein the disease state is a tumor.

10 (Original). A method according to Claim 9, wherein the tumor is a solid tumor.

11 (Currently Amended). A method according to Claim 87, wherein the disease state is ~~an autoimmune disease~~ ~~psoriasis~~.

12 (Original). A method according to Claim 1, wherein the A3AR expression level is determined by detecting the level of A3AR protein, or A3AR protein fragment in the sampled cells.

13 (Original). A method according to Claim 7, wherein the A3AR expression level is determined by detecting the level of A3AR protein, or A3AR protein fragment in the sampled cells.

14 (Original). A method according to Claim 1, wherein the A3AR expression level is determined by detecting the level of A3AR mRNA in the sampled cells.

15 (Original). A method according to Claim 7, wherein the A3AR expression level is determined by detecting the level of A3AR mRNA in the sampled cells.

16 (Currently Amended). A method for determining whether a subject patient having a disease state that is a tumor or psoriasis has a high probability of responding to a therapeutic treatment of a—the disease state by the administration of an A3AR agonist or an A3AR antagonist, the method comprising:

- (a) obtaining from the subject a sample of cells associated with the disease state;
- (b) detecting the level of expression of A<sub>3</sub> adenosine receptor (A3AR) in said sample; and
- (c) comparing the level of said A3AR expression in said cells to a control level, being the level of A3AR expression in normal cells of the

subject, or being a standard reference level for the A3AR expression which is indicative of a normal state;

wherein a difference in the level between the control and the sampled cells is indicative that the subject has a high probability of responding to a therapeutic treatment by an A3AR agonist or A3AR antagonist.

17 (Original). A method according to Claim 16, wherein the difference in the level is an increase in the level of A3AR expression in the sampled cells as compared to control.

18 (Currently Amended). A method according to Claim 16, wherein the disease state is cancer tumor.

19 (Currently Amended). A method according to Claims ~~18~~<sup>16</sup>, wherein the disease state is an autoimmune disease psoriasis.